

REMARKS

Applicants hereby affirm the election of claims 18-28, as noted on page 2 of the present Office Action.

Rejections under 35 U.S.C. § 112

Claims 18-28 were rejected under 35 U.S.C. § 112, 2nd paragraph, as being indefinite. The Office Action asserts that it is unclear whether the web, as recited in independent claim 18 and in dependent 26, is part of the claimed invention.

The rejection of the claims under 35 U.S.C. § 112, 2nd paragraph is respectfully traversed. Independent claim 18 recites:

... a solution applicator which delivers a wetting solution
to a **hydrophobic web comprising a water-dispersible
binder**;

wherein **the web** passing between the press rolls can
absorb the solution with an add-on of at least about 25%.

[emphasis added].

Applicants respectfully point out that the “hydrophobic web comprising a water-dispersible binder” is, on its face, part of the claimed invention, in combination with the other recited elements. This is only emphasized by the recitation in the final phrase of the interaction of the web with the earlier recited press rolls.

As part of this rejection, the Office Action further requires “a source or supply of the web” to be added to claim 18. Applicants traverse this requirement, and respectfully point out that the web as recited in the claims is adequately defined and described in the specification. A hydrophobic web is defined on p. 10, lines 13-23 as a fibrous web that is not wetted by aqueous liquids. A water-dispersible binder for a web is described on p. 4, lines 20-28, and includes temperature-sensitive water dispersible binders and ion-sensitive water dispersible binders. This binder description further references the co-pending patent applications incorporated by reference on p. 1, lines 24-29. The term “add-on” is defined on p. 9, lines 12-19. With respect to the language in dependent claim 26 to which the Office Action has objected, the term “conventional add-on” is

defined on p. 13, line 28 – p. 14, line 8 as “the maximum liquid add-on which can be absorbed under conventional wetting techniques without the use of press rolls”.

Moreover, Applicants’ specification provides adequate support for the web as claimed (p. 4, lines 16-31; p. 9, lines 1-4; and p. 10, line 12 – p. 11, line 5) and for the claimed interaction of the web with press rolls (p. 9, lines 4-24; p. 11, lines 6-29; and p.13, line 24 – p. 14, line 19).

Accordingly, Applicants respectfully assert that the web as recited in the claims is a part of the claims. No clarification of the claims is necessary, as the claims are already in an appropriate form, and the specification supports the elements of the claims. Applicants respectfully request that the Examiner consider the recited features of the web in the examination of the pending claims.

Rejections under 35 U.S.C. § 102

Pending claims 18-28 are directed to an apparatus for wetting a substrate, and include a solution applicator and a pair of press rolls. When used with a hydrophobic web having a water-dispersible binder, the apparatus can provide the web with a solution add-on of at least about 25% (claim 18). When compared to other wetting apparatus, the claimed apparatus may provide for 25% more add-on to the web than the other apparatus (claim 26). The Office Action indicates that the type of web recited in the claims has not yet been considered in the examination; however, as noted above the recited web is clearly part of the claims and cannot be overlooked in the evaluation of the pending claims.

A hydrophobic web having a water-dispersible binder tends to repel water-based substances, thus inhibiting the absorption of aqueous solutions into the web. Applicants have found that such a hydrophobic web material can absorb an aqueous wetting solution more easily if the wetting solution is forced into the web by an applied pressure. Pressure can be applied to the web in a variety of ways, including the use of a pair of press rolls. Although conventional press rolls, such as those used in size presses, are used to decrease the amount of liquid that is absorbed by a web, the wetting apparatus as claimed can help to increase the amount of liquid absorbed by the web.

Leonard et al. – U.S. Patent No. 3,844,813

Claims 18, 22, 26 and 28 were rejected under 35 U.S.C. § 102(b) over Leonard et al. (U.S. Pat. No. 3,844,813). The Office Action asserts that Leonard et al. discloses an apparatus comprising a pair of press rolls and a solution applicator, such that a web can be made to have a moisture add-on of at least 25%. The Office Action further asserts that the web can be a water repellant material.

The rejection of the claims over Leonard et al. is respectfully traversed. Applicants point out that Leonard et al. does not teach or suggest each and every element of Claims 18, 22, 26 and 28. In particular, Leonard et al. does not teach or suggest, nor does the Office Action assert that Leonard et al. teaches or suggests, an apparatus that can cause a hydrophobic web comprising a water-dispersible binder to absorb a wetting solution with an add-on of at least about 25%. The apparatus of Leonard et al. is directed to the coating of woven textile fabric webs with compositions such as binder resins or finishes for repelling water or oil [col. 8, line 60 – col. 9, line 14; and col. 9, lines 24-30]. The moisture absorption levels cited by the Office Action are not related to the apparatus of Leonard et al., but rather are directed to pre-wetting the substrate prior to its interaction with the coating apparatus. ✓

In contrast, the apparatus as recited in independent claim 18 applies a wetting solution to a hydrophobic web comprising a water-dispersible binder, and it is this wetting solution that is absorbed by the web at an add-on of at least about 25% when the web passes between the press rolls. The apparatus of Leonard et al. does not apply a wetting solution as recited in the claims, nor does it provide the recited solution add-on to a web. Accordingly, Claims 18, 22, 26 and 28 are not anticipated by Leonard et al., as the reference does not teach or suggest each and every element of the claims.

Bolton et al. – U.S. Patent No. 4,447,924

Claims 18-22 and 25-27 were rejected under 35 U.S.C. § 102(b) over Bolton et al. (U.S. Pat. No. 4,447,924). The Office Action asserts that Bolton et al. discloses an apparatus comprising a pair of press rolls and a solution applicator, such that a web can be made to have a moisture add-on of at least 25%. The Office Action further asserts that the web can be a variety of fabric materials.

The rejection of the claims over Bolton et al. is respectfully traversed. Applicants point out that Bolton et al. does not teach or suggest each and every element of Claims 18-22 and 25-27. In particular, Bolton et al. does not teach or suggest, nor does the Office Action assert that Bolton et al. teaches or suggests, an apparatus that can cause a hydrophobic web comprising a water-dispersible binder to absorb a wetting solution with an add-on of at least about 25%. The apparatus of Bolton et al. is directed to the treating of cotton-based woven fabric webs with wetting solutions containing chemical additives for the fabric [col. 6, lines 17-56].

In contrast, the apparatus as recited in independent claim 18 applies a wetting solution to a hydrophobic web comprising a water-dispersible binder, and it is this web that can absorb the wetting solution at an add-on of at least about 25% when the web passes between the press rolls. The apparatus of Bolton et al. does not apply a wetting solution to a hydrophobic web comprising a water-dispersible binder as recited in the claims to provide the recited solution add-on to such a web. Accordingly, Claims 18-22 and 25-27 are not anticipated by Bolton et al., as the reference does not teach or suggest each and every element of the claims.

Bafford et al. – U.S. Patent No. 5,089,296

Claims 18-22 and 26-28 were rejected under 35 U.S.C. § 102(b) over Bafford et al. (U.S. Pat. No. 5,089,296). The Office Action asserts that Bafford et al. discloses an apparatus comprising a pair of press rolls and a foam/solution applicator, such that a web can be made to have a moisture add-on of at least 25%. The Office Action further asserts that the web can be a paper web or a nonwoven web.

The rejection of the claims over Bafford et al. is respectfully traversed. Applicants point out that Bafford et al. does not teach or suggest each and every element of Claims 18-22 and 26-28. In particular, Bafford et al. does not teach or suggest, nor does the Office Action assert that Bafford et al. teaches or suggests, an apparatus that can cause a hydrophobic web comprising a water-dispersible binder to absorb a wetting solution with an add-on of at least about 25%. The apparatus of Bafford et al. is directed to the application of a polymer latex release coating to paper webs. The paper webs disclosed in Bafford et al. are not hydrophobic webs comprising

a water-dispersible binder, but rather are conventional paper webs such as unbleached kraft [col. 1, lines 23-40; col. 4, lines 13-19; and Examples]. Bafford et al. discloses that the paper web may contain a resin before being used with the apparatus; however, the listed resins do not include water-dispersible binders [col. 4, lines 49-58].

In contrast, the apparatus as recited in independent claim 18 applies a wetting solution to a hydrophobic web comprising a water-dispersible binder, and it is this web that can absorb the wetting solution at an add-on of at least about 25% when the web passes between the press rolls. The apparatus of Bafford et al. does not apply a wetting solution to a hydrophobic web comprising a water-dispersible binder as recited in the claims to provide the recited solution add-on to such a web. Accordingly, Claims 18-22 and 26-28 are not anticipated by Bafford et al., as the reference does not teach or suggest each and every element of the claims.

Rejections under 35 U.S.C. § 103

Claim 23 was rejected under 35 U.S.C. § 103(a) over Leonard et al. Claims 23 and 24 were rejected under 35 U.S.C. § 103(a) over Bolton et al. and separately over Bafford et al. The Office Action asserts that it would be obvious to vary the gap between the rolls and/or the hardness of the roll covering through routine experimentation. Due to the similarities among the rejections over these three references, all of the rejections under 35 U.S.C. § 103 are addressed together.

The rejection of the claims under 35 U.S.C. § 103(a) is respectfully traversed. Leonard et al, Bolton et al, and Bafford et al., alone or in combination, fail to provide each and every element of the claims. As noted above, none of the applied references teaches or suggests an apparatus that can cause a hydrophobic web comprising a water-dispersible binder to absorb a wetting solution with an add-on of at least about 25%, as recited in independent claim 18. The stated rejection under 35 U.S.C. § 103(a) does not assert that it would be obvious to provide an apparatus as recited in the claims. Since the applied references do not teach or suggest each and every element of independent claim 18, claims 23 and 24, which depend from claim 18, cannot be obvious over these references.

Moreover, Applicants point out that the separation of the press rolls and the presence of a roll cover having a particular range of hardness values are not mere obvious design considerations. These parameters of the press rolls can contribute to the unique properties of the claimed apparatus and its interaction with a hydrophobic web having a water-dispersible binder. As noted above, a web as claimed can be difficult to wet with an aqueous solution, and the claimed apparatus can cause an increase in the absorption of a wetting solution by the web. In contrast, the typical design rules of press rolls are directed to decreasing the amount of liquid that is absorbed by a web rather than increasing it. Thus, routine experimentation with press rolls would tend to provide a lower add-on of wetting solution to a hydrophobic web and would teach away from the apparatus as claimed. Accordingly, and in addition to the reasons given above, claims 23 and 24 are not obvious over Leonard et al., Bolton et al., or Bafford et al., whether alone or in combination.

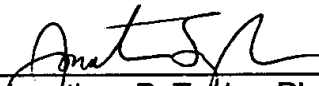
Conclusion

In conclusion, all of the grounds raised in the outstanding Office Action for rejecting the application are believed to be overcome or rendered moot based on the remarks above. Thus, it is respectfully submitted that all of the presently presented claims are in form for allowance, and such action is requested in due course. Should the Examiner feel a discussion would expedite the prosecution of this application, the Examiner is kindly invited to contact the undersigned.

Also submitted at this time is a Petition for Extension of Time for two (2) months.

Respectfully submitted,

6/24/03


Jonathan P. Taylor, Ph.D.
Registration No. 48,338
Agent for Applicant

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, ILLINOIS 60610
(312) 321-4200